


**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

DATE: June 3, 1997

SUBJECT: Sauget Areas 1 and 2 Site Visit and Biological Observations, 4/17-18/97, Sauget, IL

FROM: James Chapman, Ph.D., Ecologist, Technical Support Section 

TO: Sam Borries, OSC, Emergency Response Branch, Response Section 2

This memo reports the biological observations made as part of the sediment and soil sampling efforts on 4/17-18/97 at a pit area and several ponds in Sauget Area 2, Site Q, and in the Dead Creek wetland in Sauget Area 1, Segment F. This is not a comprehensive biological survey. Species listed are the common, obvious species encountered near the sampling sites in early spring. Species were omitted when they could not be identified to genus (for example, some of the woody plants with under-developed leaves but no intact buds, and some of the herbaceous plants that had not flowered), with two exceptions identified only to family.

Species names are based on the following texts: plants (Gleason and Cronquist 1991), birds (Peterson 1980), mammals (Kurta 1995), and herptiles (Conant and Collins 1991).

Sauget Area 2, Site Q, Pit Area (sediment and soil sample locations Q201 and Q202)

The pit area, located west of the railroad tracks and southeast of coal piles, is highly disturbed with a sparse and predominately weedy vegetation. A pond has formed within the pit, but is without macrophytes (vascular aquatic plants) or visible algae. The sole signs of aquatic life were water striders. Water striders feed on small insects that fall onto the water surface (Dunn 1996), which means they are part of a predominantly terrestrial food web. The pit pond therefore does not appear to provide viable aquatic habitat. Although the surrounding land is disturbed and weedy, it is utilized by a variety of common birds and mammals, which may use the pit pond for drinking water.

Aquatic Vegetation

none

Aquatic Insects

Water striders, *Gerris* sp.

Herptiles (amphibians or reptiles)

none

Terrestrial Vegetation

Grasses (several spp., not identified)

Goosefoot, *Chenopodium* sp.
 Knotweed, smartweed, *Polygonum* spp.
 Dock, *Rumex* sp.
 Cocklebur, *Xanthium strumarium*
 Common mullein, *Verbascum thapsus*
 Common evening-primrose, *Oenothera biennis*
 Thistle, *Cirsium* sp.
 Black-eyed susan, *Rudbeckia hirta*
 Violet, *Viola* sp.

Birds

Red-winged blackbirds, *Agelaius phoeniceus* (in the surrounding area, but not at the pit pond itself)
 Robin, *Turdus migratorius*
 Northern cardinal, *Cardinalis cardinalis*
 Field sparrow, *Spizella pusilla*
 Rock dove, *Columba livia* (large flock by coal piles)

Mammals

Domestic dog, *Canis familiaris* (tracks)
 White-tailed deer, *Odocoileus virginianus* (tracks)
 Eastern cottontail, *Sylvilagus floridanus*

Although not observed, rodents, fox, and coyote probably use this area as well.

Sauget Area 2, Site Q, Ponds (sediment and soil sample locations Q203 - Q208)

The area surrounding the ponds is also disturbed, but less recently than the pit area so that open stands of trees have developed and substantial amounts of coarse woody debris have accumulated. The habitat quality is low, but it supports a variety of organisms. The ponds have substantial growths of macrophytes and algae, as well as amphibians, fish, and waterfowl. Local fishermen report the presence of catfish and buffalo head. The species listed for the pit area occur in this area as well but are not listed again. Only the additional species are included below:

Aquatic Vegetation

Water weed, *Elodea* sp.
 Cursed crowfoot, *Ranunculus sceleratus* (tentative identification of vegetative plants)
 Greater duckweed, *Spirodela polyrhiza*
 Several other macrophytes were observed but not identified.
 Filamentous green algae and periphyton (algae growing on macrophytes) were also observed but not identified.

Herptiles

Chorus frog, *Pseudacris triseriata* (calls)

Unidentified tadpoles were frequently observed in the shallows.

Aquatic birds

American coot, *Fulica americana* (flock of about 20)

Other birds reported to have been seen previously include:

Great blue heron, *Ardea herodias*

Egret - probably Great or Snowy egrets or immature Little blue heron (Bohlen 1989).

The ponds are probably utilized by other waterfowl.

Riparian/Terrestrial Vegetation

Willow, *Salix* spp.

Cottonwood, *Populus deltoides*

Birds

Common flicker, *Colaptes auratus*

Kestrel, *Falco sparverius*

Wild turkey, *Meleagris gallopavo*

Sauget Area 1, Segment F, Dead Creek and associated wetland (sediment and soil sample locations F101-F109)

Dead Creek flows through a wooded corridor in Segment F. The corridor ranges in width from roughly 20 to 100 ft (on the east bank) with a predominantly cottonwood overstory. The variation in corridor width is partly related to the presence of a beaver dam between sediment sample locations F103 and F104 and the consequent upstream flooding. The trees form a mostly closed canopy over the upper portion of Segment F, but Dead Creek becomes much broader in the lower portion so that it only has tree cover along the banks. The vegetation is of low floristic quality, consisting primarily of invasive and pioneer plants. This is not surprising since the wetlands were drained and the woods cleared prior to the 1930's, and the surrounding land is highly disturbed by agriculture and industry. Segment F does, however, provide good quality wildlife habitat, as evidenced by its use by black-crowned night heron, a state-listed endangered species. There are plentiful detrital inputs (twigs, bark and leaf litter) to the creek, which provides a substantial food base for the support of benthic invertebrate populations. The main limitation to benthic invertebrates is probably the lack of riffle areas and therefore a potential for periods of low dissolved oxygen levels.

Aquatic Vegetation

Lesser Duckweed, *Lemna minor*

Also unidentified filamentous green algae and periphyton

Aquatic insects

Water boatman (Corixidae)

Herptiles

Painted turtles, *Chrysemys picta* (numerous, sunning on the northeast wetland extension above the confluence with Dead Creek)

Aquatic Birds

Black-crowned night heron, *Nycticorax nycticorax* (3 individuals at the northeast wetland extension above the confluence with Dead Creek) (state-listed endangered)

Belted kingfisher, *Megascyle alcyon*

Canada goose, *Branta canadensis* (nesting pair at the confluence with Dead Creek, flock on northwest backwater)

American coot, *Fulica americana*

Riparian/Terrestrial Vegetation

Cottonwood, *Populus deltoides* (dominant overstory sp.)

Boxelder, *Acer negundo*

Silver maple, *Acer saccharinum*

Sycamore, *Plantanus occidentalis*

Elm, *Ulmus* sp. (saplings)

Wild black cherry, *Prunus serotina*

Dogwood, *Cornus* sp.

Willow, *Salix* spp.

Nettle, *Urtica* sp.

Bramble, *Rubus* sp.

Poison ivy, *Toxicodendron radicans*

Grape, *Vitis* sp.

Trumpet-creeper, *Campsis radicans*

Onion, *Allium* sp.

Cleavers, *Galium aparine*

Horsetail, *Equisetum* sp.

Gill-over-the-ground, *Glechoma hederacea*

Dooryard (common blue) violet, *Viola sororia* (=papilionacea)

Wild white violet, *Viola macloskeyi* (=pallens)

Field penny-cress, *Thlaspi arvense*

Short-spurred corydalis, *Corydalis flavula*

Sedges, (Cyperaceae)

Birds

Red-winged blackbirds, *Agelaius phoeniceus* (in the surrounding area, but not at the pit pond itself)
 Robin, *Turdus migratorius*
 Northern cardinal, *Cardinalis cardinalis*
 White-throated sparrow, *Zonotrichia albicollis*
 Mourning dove, *Zenaida macroura*
 Common flicker, *Colaptes auratus*
 Blue-gray gnatcatcher, *Poliophtila caerulea*

Mammals

American beaver, *Castor canadensis* (dam and vegetation marks)
 White-tailed deer, *Odocoileus virginianus*
 Common raccoon, *Procyon lotor* (tracks)
 Red fox, *Vulpes vulpes* (tracks)
 Domestic dog, *Canis familiaris* (tracks)

Endangered species

One federally-listed threatened species is recorded as occurring in St. Clair County, the decurrent false aster, *Boltonia decurrens* (Illinois Natural Heritage Database, Feb. 1994). The preferred habitat is alluvial prairie and marshland in river floodplains (Herkert 1991). It is unlikely to occur in Segment F due to the history of extensive disturbance; however, since it flowers in September and October, the present survey provides no evidence regarding its potential occurrence at the site.

Several state-listed birds are likely to utilize Segment F and/or the Site Q ponds (the night heron is the only one sighted in this survey):

Black-crowned night heron, *Nycticorax nycticorax* (endangered)
 Little blue heron, *Florida (=Egretta) caerulea* (endangered)
 Snowy egret, *Egretta thula* (endangered)
 Great egret, *Casmerodius albus* (threatened)
 Pied-billed grebe, *Podilymbus podiceps* (threatened)

I may be contacted at 6-7195 if you have questions or comments. Please fill out the attached evaluation form and return it to Steve Ostrodka, SRT-4J. The information is used to assess and improve our services.

cc: Steve Ostrodka, Section Chief, TSS
 Donald Bruce, Section Chief, RS#2
 Leah Evison, RPM, RRB#2, RRS#6

Literature Cited

- Bohlen, H. 1989. *The Birds of Illinois*. Indiana Univ. Press, Bloomington. 222 p.
- Conant, R. and J. Collins. 1991. *A Field Guide to Reptiles and Amphibians, Eastern and Central North America*, 3rd ed. Houghton Mifflin Co., Boston. 450 p.
- Dunn, G. 1996. *Insects of the Great Lakes Region*. Univ. Michigan Press, Ann Arbor. 324 p.
- Gleason, H.A. and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. 2nd ed. New York Botanical Garden, Bronx. 910 p.
- Herkert, J. (ed.). 1991. *Endangered and Threatened Species of Illinois: Status and Distribution, Vol. 1 - Plants*. Illinois Endangered Species Protection Board, Springfield. 158 p.
- Kurta, A. 1995. *Mammals of the Great Lakes Region, Revised ed.* Univ. Mich. Press, Ann Arbor. 376 p.
- Peterson, R. 1980. *A Field Guide to the Birds of Eastern and Central North America*. Houghton Mifflin Co., Boston. 384 p.